

REMARKS¹

By the present Amendment, Applicants have amended claims 9, 10, 29, and 30 to more appropriately define the invention. Claims 9-12 and 29-30 are pending, and claims 1-3, 5-7, and 25-28 have been withdrawn as directed to non-elected inventions.

In the Office Action, the Examiner rejected claims 9-12 under 35 U.S.C. § 102(e) as anticipated by Thaler et al. (U.S. Patent No. 5,842,106). Claims 29 and 30 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

Applicants appreciate the indication of allowable subject matter, and respectfully traverse the rejection of claims 9-12 under 35 U.S.C. § 102(e).

In order to properly anticipate Applicants' claimed invention under 35 U.S.C. § 102, each and every element of the claim in issue must be found, "either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim. Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)." See M.P.E.P. § 2131, 8th ed., Rev. of May 2004.

Thaler et al. fails to teach each and every element of claims 9-12. Particularly, claim 9 recites a method of burying powder in a trench including "precipitating the

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

powder in the dispersion within the trench to bury the trench with the precipitated powder.”

The Examiner alleged that “Thaler anticipates, in fig. 1A-C, a method of burying powder in a major surface of a substrate 10 by coating a region including the trench with a solution in which the powder disperses and precipitating the powder in the solution, col. 5, lines 5-11.” Office Action, page 2. Applicants disagree. Thaler et al. only teaches that “[v]ia ink 40 was injected into the holes 30 (FIG. 1C). Finally, the plate 10 was heated to solidify the via ink and burn away the sacrificial layer (FIG. 1D).” Thaler et al., col. 5, ll. 9-12. Thaler et al. does not teach at least “precipitating [a] powder in the dispersion within the trench to bury the trench with the precipitated powder,” as recited in claim 1.

In fact, Thaler et al.’s via ink 40 cannot precipitate. Thaler et al. specifically teaches “forming [] holes through the substrate . . . through which the conduits will protrude, filling the holes with a metallic thick film ink (i.e., a so-called ‘via ink’) and then firing the substrate and ink fill to convert the ink into a good conductor.” Thaler et al., col. 3, ll. 20-25. When sacrificial layers are coated on both sides of the substrate, holes penetrate through both the substrate and the sacrificial layers. See Thaler et al., col. 4, ll. 50-61. Because the holes penetrate through the substrate, if the via ink precipitates, the solid content in the via ink will escape from the bottom opening of the holes and no “good conductor” will remain in the holes. See also Thaler et al., FIGS. 2-4.

Therefore, Thaler et al. fails to teach at least “precipitating the powder in the dispersion within the trench to bury the trench with the precipitated powder,” as recited

in claim 9. As a result, Thaler et al. cannot anticipate claim 9, and claim 9 is allowable over Thaler et al.

Claims 10-12 and 29-30 depend from claim 9 and are also allowable at least because of their dependence from an allowable base claim.

In view of the foregoing remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By:



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